AMENDMENTS TO THE CLAIMS

Claims 1-25 (Cancelled).

26. (Currently Amended) ~~The bump forming apparatus of claim 1, further comprising~~ A bump forming apparatus comprising:

a bonding stage for supporting a semiconductor wafer and for heating the semiconductor wafer to a temperature for forming bumps on electrodes on a circuit of the semiconductor wafer;

a bump forming head for forming the bumps on the electrodes of the semiconductor wafer;

a load and transfer device for placing the semiconductor wafer on and removing the semiconductor wafer from said bonding stage;

a controller for operating said bonding stage and said load and transfer device so as to perform a post-heating operation on the semiconductor wafer after the bumps are formed on the semiconductor wafer to thereby control a temperature drop of the semiconductor wafer, said controller being operable to control the post-heating operation on the semiconductor wafer by controlling said load and transfer device and said bonding stage so that the semiconductor wafer is positioned by said load and transfer device at a cooling position above said bonding stage while said bonding stage is heated to the temperature for forming the bumps such that the semiconductor wafer does not contact said bonding stage when in the cooling position; and

a wafer temperature control device for controlling a temperature difference between a temperature at a bonding stage-contact face of the semiconductor wafer and a temperature at a circuit formation face of the semiconductor wafer opposite to the bonding stage-contact face before the bump formation is performed and after the semiconductor wafer is positioned on said bonding stage, said wafer temperature control device being operable to control the temperature difference to be within a warpage non-generation temperature difference range so that a warpage of the semiconductor wafer is restricted to a level not obstructing the bump formation.

27. (Original) The bump forming apparatus of claim 26, wherein said wafer temperature control device is operable to control the temperature difference by heating the circuit formation face of the semiconductor wafer placed on said bonding stage.

28. (Original) The bump forming apparatus of claim 27, wherein said wafer temperature control device is operable to heat the circuit formation face by supplying heating air to the circuit formation face of the semiconductor wafer, the heating air having a temperature for maintaining the temperature difference within the warpage non-generation temperature difference range.

29. (Original) The bump forming apparatus of claim 26, wherein said wafer temperature control device is operable to control the temperature difference by cooling the bonding stage-contact face of the semiconductor wafer placed on said bonding stage.

30. (Original) The bump forming apparatus of claim 29, wherein said wafer temperature control device is operable to cool the bonding stage-contact face by supplying cooling air to the bonding stage-contact face of the semiconductor wafer, the cooling air having a temperature for maintaining the temperature difference within the warpage non-generation temperature difference range.

31. (Original) The bump forming apparatus of claim 26, wherein said wafer temperature control device is operable to maintain the temperature difference within a warpage non-generation temperature difference range of 20°C.

32. (Original) The bump forming apparatus of claim 26, wherein the semiconductor wafer comprises a quartz-based wafer.